Complete Summary

GUIDELINE TITLE

Assessing cognitive function.

BIBLIOGRAPHIC SOURCE(S)

Foreman MD, Fletcher K, Mion LC, Trygstad L. Assessing cognitive function. In: Mezey M, Fulmer T, Abraham I, Zwicker DA, editor(s). Geriatric nursing protocols for best practice. 2nd ed. New York (NY): Springer Publishing Company, Inc.; 2003. p. 99-115. [6 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Cognitive dysfunction

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness
Evaluation
Management

CLINICAL SPECIALTY

Family Practice
Geriatrics
Internal Medicine
Nursing

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Nurses

GUIDELINE OBJECTIVE(S)

- To list purposes of a cognitive assessment
- To compare and contrast categories of cognitive decline
- To describe the parameters and assessment methods for a comprehensive assessment of cognitive function
- To compare and contrast formal and informal methods of assessing cognitive function
- To present a standardized practice protocol for assessing cognitive function

TARGET POPULATION

Hospitalized older adults

INTERVENTIONS AND PRACTICES CONSIDERED

1. Formal cognitive testing, considerations for choice of appropriate instrument
2. Informal observations of nurse-individual interactions
3. Data collection from family and/or friends, formal care givers, or any individual who has previous intimate knowledge of person
4. Management of the assessment environment, including:
    - physical environment
    - interpersonal environment
    - timing considerations
5. Assessment of the following parameters:
    - alertness/level of consciousness
    - attention
    - memory
    - thinking
    - perception
    - psychomotor behavior
    - higher cognitive functions, e.g., insight and judgment
6. Differentiating dementia from depression and delirium
7. Interpretation and documentation of assessment results with appropriate referrals
8. Evaluation of expected individual, health care provider, and institutional outcomes

MAJOR OUTCOMES CONSIDERED

- Cognitive function assessment rate
- Referral rate

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Medline, Ovid, CINAHL, and ancestry were the electronic databases used.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Assessment

Methods of Assessment

Formal: cognitive testing using standardized instruments, e.g., Folstein's Mini-Mental State Examination (MMSE).

- Advantages: standardized; widely used with various individual populations with known reliability and validity in these populations; quick and easy to use; enables comparison across individuals, and nurses.
- Disadvantages: individual performance influenced by pain, education, fatigue, cultural background, and perceptual and physical abilities; as a result, the meaning of the score not always clear; meaning of change in score uncertain.

Informal: through structured observations of nurse-individual interactions

- Advantages: minimizes burden of individual and nurse; may have greater meaning about individual's actual cognitive ability/performance.
- Disadvantages: not standardized, therefore unknown reliability and validity of observations; difficult to make judgments regarding change in an individual´s condition; variability in interpretation. Can be imputed for formal evaluation.

Sources of information: obtain data from a variety of sources whenever possible, e.g., family and/or friends, formal care givers, any individual who has previous intimate knowledge of person.

Other Considerations for Assessment

Characteristics of the Environment for Assessment

Physical Environment

- Comfortable ambient temperature
- Adequate lighting but not glaring
- Free of distractions, e.g., should be conducted in the absence of others and other activities
- Position self to maximize individual's sensory abilities

Interpersonal Environment

- Prepare the examinee for the assessment, e.g., what will take place and how long it will take

- Initiate the evaluation with non-threatening conversation to establish patient-professional relationship
- Use self-paced rate for assessment, i.e., rate set by individual
- Emotionally non-threatening

Timing Considerations

- The timing of the assessment should be selected to reflect the actual cognitive abilities of the individual and not extraneous factors
- Assessment may need to be divided to avoid fatigue and the subsequent over exaggeration of deficits
- Times of the day to generally avoid:
    - Immediately upon awakening from sleep; wait at last 30 minutes
    - Immediately before or after meals
    - Immediately before or after medical diagnostic or therapeutic procedures
    - Presence of pain or discomfort

Parameters for Assessment

- Alertness/level of consciousness: the most rudimentary cognitive function and therefore must be determined first, the basis level of arousal or responsiveness to stimuli. As the level of consciousness declines, one is less able to accurately assess and any assessment at level of obtundation or less is futile. Level of consciousness determined by interaction with the individual and determination of the level made on the basis of the individual's best eye, verbal and motor response to stimuli.
    - Alert: awake and aware of normal external and internal stimuli; able to interact in a meaningful way with the examiner
    - Lethargy or somnolence: not fully alert; individual tends to drift to sleep when not stimulated, diminished spontaneous physical movement, loses train of thought, ideas wander.
    - Obtundation: transitional stage between lethargy and stupor; difficult to arouse, meaningful testing futile, requires constant stimulation to elicit response.
    - Stupor or semicoma: individual mumbles or groans in response to persistent and vigorous physical stimulation.
    - Coma: completely unarousable, no behavioral response to stimuli.
- Attention: ability to attend/concentrate on stimuli: through naturally occurring conversation and daily interaction with individual; does the individual pay attention to conversation? Can the individual follow through with directions, especially a three-step command? Does the individual have difficulty switching to a new topic? Is the individual easily distracted?
- Memory: ability to register, retain, and recall information both new and old; in many instances, the examiner must be able to validate individual response. Orientation is one component of memory function; disorientation may be a consequence of the absence of calendars and clocks rather than of cognitive dysfunction. Memory can be evaluated through naturally occurring interactions: Does individual remember your name? Is individual able to learn and remember new information?
- Thinking: ability to organize and communicate ideas. Thought should be organized and coherent, and appropriate; a person's ability to think can best

be determined through naturally occurring interactions and conversations. Conversation should not be disorganized, rambling, incoherent, fragmented.
- Perception: presence of misperceptions of environment; ask questions to determine presence/absence of illusions; delusions; or visual or auditory hallucinations.
- Psychomotor behavior: two elements are important--the person's general behavior and ability to comprehend and perform simple motor skills. Relative to general behavior direct observation of the individual's ability to sit upright, does the person sit quietly or is the person agitated and restless, or is the person´s physical movement extraordinarily retarded? Relative to execution ability ask the individual to perform certain ADLs/IADLs, or as with Folstein's MMSE, to perform a three-step command, and to copy a figure.
- Higher cognitive functions: complex neuropsychological functions that are predicated upon the integrity and interaction of the more basic functions previously presented. Can the individual complete a task such as balancing a checkbook?
    - Insight: ability to understand oneself and the situation one finds oneself in. Evaluated through naturally occurring conversations or use of standardized test with the individual. The person should be aware of physical condition warranting hospitalization; the fact that he has been hospitalized, and be able to evaluate similarities and dissimilarities.
    - Judgment: ability to evaluate a situation (real or hypothetical) and determine an appropriate action; also be observant for non-rational or inappropriate decisions. Evaluated through naturally occurring interactions with individual or through direct examination using previously constructed hypothetical simulations of events.

Interpretation of Results

- Performance on formal testing easily influenced by education, motivation, sensory functioning, language (especially when English is a second language), and a distracting environment
- Attend to both the nature and pattern of responses as well as to the quantity of errors committed

Follow-up To Monitor Condition

- Staff competence in the assessment of cognitive function
- Consistent and appropriate documentation of cognitive assessments
- Consistent and appropriate care and follow-up in presence of deviations in cognitive function.
- Nature and origins of deviations will be sought in a timely manner

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Individual Cognitive Status Assessment Can be Instrumental in:

- identifying the presence and monitoring the course of specific pathophysiologic states, for example, dementia, depression, or delirium
- determining the individual's readiness to learn
- establishing clinical goals
- evaluating the effectiveness of a treatment regimen

Individual Nurses Can Demonstrate:

- evidence of assessment upon admission to the unit/service (to include inter-unit and inter-institutional transfers)
- detection of deviations will be prompt and early with appropriate care and treatment instituted in a timely manner
- plans of care will appropriately address corrective and supportive issues in the presence of deviation in cognitive function

Health Care Providers Can Demonstrate:

- assessment and documentation of cognitive function upon admission of an older individual to their care, as well as daily to monitor for any change in level of alertness or behavior
- treatment and care that incorporates appropriate strategies to address any deviation in cognitive function and that consider the use of physical and pharmacologic restraint as a last resort
- competence in cognitive assessment
- evidence of ability to differentiate among the different types of cognitive change/decline

Institutions Can Demonstrate:

- increased documentation of cognitive function
- increased timeliness of identification of deviations in cognitive function
- increased referrals to appropriate advanced practitioners (e.g., geriatric resource nurse, geriatrician, geriatric/gerontological or psychiatric clinical nurse specialist or nurse practitioner, or consultation-liaison service)
- care of individual with deviations in cognitive function will be modified on the basis of the deviation
- follow-up to monitor condition
- staff competence in the assessment of cognitive function
- consistent and appropriate documentation of cognitive assessments
- consistent and appropriate care and follow-up in presence of deviations in cognitive function
- timely search for the nature and origins of deviations

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This practice protocol is a general approach to the assessment of cognitive functioning that must be adapted to the specifics of the health care setting (e.g., acute care, home care, or long-term care).

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003

GUIDELINE DEVELOPER(S)

The John A. Hartford Foundation Institute for Geriatric Nursing - Academic Institution

GUIDELINE DEVELOPER COMMENT

The guidelines were developed by a group of nursing experts from across the country as part of the Nurses Improving Care for Health System Elders (NICHE) project, under sponsorship of The John A. Hartford Foundation Institute for Geriatric Nursing.

SOURCE(S) OF FUNDING

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GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Copies of the book Geriatric Nursing Protocols for Best Practice, 2nd edition: Available from Springer Publishing Company, 536 Broadway, New York, NY 10012; Phone: (212) 431-4370; Fax: (212) 941-7842; Web: www.springerpub.com.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on May 30, 2003. The information was verified by the guideline developer on August 25, 2003.

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